

Further Assessments of Meyer and Allen's (1991) Three-Component Model of Organizational Commitment

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The construct validity of J. P. Meyer and N. J. Allen's (1991) 3-component model of organizational commitment was assessed. Despite the large error components associated with some of the items from Meyer and Allen's scales, the existence of 3 facets of commitment (affective, continuance, and normative) was generally supported by a confirmatory factor analysis of data from 2,301 nurses. Moreover, some of the expected differential relationships of these facets to antecedents and outcomes of commitment were observed in both the nurse sample and a sample comprising 80 bus operators. However, the facets generally did not relate strongly or differentially to a set of rating and nonrating measures of job performance.

Organizational commitment is of interest to both behavioral scientists and practicing managers (cf. Mowday, Porter, & Steers, 1982). Although most practitioners are inclined to associate high commitment with increased productivity and lower turnover, organizational scientists strive to understand the facets of commitment and their differential relationships to both antecedents and work outcomes (cf. Allen & Meyer, 1990; Jaros, Jermier, Koehler, & Sincich, 1993; Mathieu & Zajac, 1990; Meyer, Paunonen, Gellatly, Goffin, & Jackson, 1989; Randall, Fedor, & Longenecker, 1990; Reichers, 1985).

This study answers recent calls for (a) further refinement of the facet measures of commitment and (b) an assessment of their distinctive relationships with disparate measures of work outcomes (Meyer & Allen, 1991; Reichers, 1985).

Conceptualizations of Organizational Commitment

One major approach to the study of organizational commitment is to view it in terms of an affective attachment. More specifically, with affective commitment the individual identifies with the organization and, therefore, is committed to pursue its goals. Such affective commitment is often measured using the Organizational Commitment Questionnaire (OCQ; cf. Mowday et al., 1982).

Another view of organizational commitment, known as *side-bet theory*, evolved from the work of Becker (1960), who regarded commitment as less affective and more calculative—a reflection of recognized, accumulated interests (e.g., pensions and seniority) that bind one to a particular organization. This view of commitment has most often been measured with scales developed by Ritzer and Trice (1969), which were later modified by Hrebiniak and Alutto (1972).

Meyer and Allen (1984) named these two views *affective commitment* and *continuance commitment* and asserted that they have often been confounded in previous research. In particular, they argued that the measure used to test Becker's (1960) ideas was saturated with affective commitment and thus did not allow for an appropriate test of the side-bet perspective. Accordingly, they developed alternative scales to measure affective commitment and continuance commitment (cf. Meyer, Allen, & Gellatly, 1990) and further differentiated them from normative commitment (cf. Allen & Meyer, 1990). *Normative commitment* refers to the employee's feelings of obligation to stay with the organization: feelings resulting from the internalization of normative pressures exerted on an individual prior to entry (e.g., familial or cultural socialization) or following entry (e.g., organizational socialization).

In total then, a three-component model of organizational commitment has evolved, and measures for each component have been proposed (cf. Allen & Meyer, 1990; Meyer & Allen, 1991). Affective commitment (AC) refers to the employee's emotional attachment to, identification with, and involvement in the organization. Continuance commitment (CC) refers to commitment based on the costs that the employee associates with leaving the organization. Finally, normative commitment (NC) refers to the employee's feelings of obligation to stay with the organization.

Tests of the Three-Component Model

Psychometric Characteristics

One type of evidence in favor of Meyer and Allen's (1991) three-component conceptualization is that their scales demon-

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strate acceptable internal consistency reliabilities (Allen & Meyer, 1990; McGee & Ford, 1987; Meyer & Allen, 1984; Meyer et al., 1989). Also, exploratory factor analyses have supported the existence of at least three distinguishable facets of this model (cf. Allen & Meyer, 1990; Dunham & Grube, 1990; McGee & Ford, 1987). There has been some debate, though, about the viability of a fourth component. In particular, McGee and Ford have argued that the CC scale consists of two subscales: one assessing the personal sacrifice associated with leaving the organization (CC:HiSac) and the other an awareness of the lack of job alternatives (CC:LoAlt). They found that the former correlated positively, and the latter negatively, with AC. Moreover, in a confirmatory factor analysis (CFA) involving the AC and CC scales only, Meyer et al. (1990) also found the same two (albeit highly correlated) CC factors.

One of our aims in this study was to more fully investigate the factor structure of Allen and Meyer's (1990) scales by incorporating all three (AC, CC, and NC) scales into a single CFA. Specifically, we used a large sample of nurses to statistically compare the one-, three-, and four-component models in a nested analysis (cf. Bollen, 1989, pp. 291–296).

Antecedents and Correlates of Commitment

Differential antecedents of the various forms of commitment have also been proposed for which support is only beginning to build (cf. Allen & Meyer, 1990; Dunham & Grube, 1990). For example, Allen and Meyer proposed that work experiences associated with personal competence (e.g., job challenge, job scope, and opportunity for self-expression) should most directly affect AC. Accordingly, we expected general job satisfaction (Ironson, Smith, Brannick, Gibson, & Paul, 1989) and scores from the Motivation scale of the Multimethod Job Design Questionnaire (MJDQ; Campion & Thayer, 1985) to be more highly related to AC than to the other forms of commitment. The OCQ (Mowday et al., 1982) was also expected to correlate most strongly with AC, given its heavy affective content.

There was also reason to expect age and organizational tenure to relate differentially to CC, AC, and NC. In particular, significant positive relationships should be observed for CC and AC as they relate to age and tenure, whereas there is little theoretical basis to expect such relationships with NC. For example, although Meyer and Allen (1984) presented some arguments to the contrary, positive relationships involving age, tenure, and CC would be expected to the limited extent that age and tenure are surrogates for the organizational investments (e.g., specificity of skills and pension contributions) and for the perceived lessening of interorganizational job alternatives thought to underlie high CC. Similarly, the anticipated positive relationships involving age, tenure, and AC rest on the assumption that seniority reflects opportunities to better one's position within an organization over time. In fact, meta-analytic work by Mathieu and Zajac (1990) has revealed modest positive relationships involving attitudinal commitment (similar in concept to AC) and age (mean true correlation $r_t = .22$) and tenure (mean $r_t = .15$). Moreover, modest positive relationships were also found between calculative commitment (similar in concept to CC) and age (mean $r_t = .17$) and tenure (mean $r_t = .20$). Accordingly, we

expected age and tenure to relate positively to Allen and Meyer's (1990) AC and CC scales in this study.

Consequences of Commitment

Meyer and Allen (1991) proposed that employees' willingness to contribute to organizational goals would be influenced differentially by the nature of their commitment, with those wanting to belong (AC) being more likely to exert effort to perform than those needing to belong (CC) or those obligated to belong (NC). In a study of first-line supervisors involving AC and CC only, Meyer et al. (1989) found (consistent with expectations) that AC correlated positively and NC correlated negatively with unit-manager ratings of performance and promotability. Konovsky and Cropanzano (1991) reported a similar pattern of findings, but Shore and Barksdale (1991) found performance ratings to be related (negatively) to CC only.

We also examine AC and CC (along with NC) for their differential relationships to rated performance in addition to some nonrating measures of performance, which typically have only modest relationships to supervisor evaluations (cf. Bycio, 1992; Seashore, Indik, & Georgopoulos, 1960). Specifically, we used a sample of bus drivers to examine rated performance, nonrating performance (accidents, commendations, and complaints), and absences (culpable and nonculpable) for their possible differential relationships to AC, CC, and NC.

Finally, we also included intention to quit as a consequence in this study. Negative relationships involving intent were expected with all three components of commitment (cf. Meyer & Allen, 1991). However, consistent with meta-analytic work involving attitudinal and calculative commitment (cf. Mathieu & Zajac, 1990), we expected the strongest intent to turnover relationship with Allen and Meyer's (1990) AC scale.

Method

Subjects and Procedure

Sample 1. Questionnaires were sent to a random sample of 4,000 registered nurses who belonged to a 75,000-member nursing association. Those who did not respond were sent a postcard as a follow-up reminder. Those failing to respond within 2 weeks of this second mailing were sent another copy of the questionnaire. This resulted in 2,301 (57%) usable returns. Ninety-eight percent of the respondents were female. Their average age was 38 years, and 74% were married. Respondents had an average of 15 years in nursing, whereas their average hospital tenure was 9 years.

Sample 2. One hundred twenty-six bus operators employed by a large municipal transit authority were given questionnaires to complete and return by mail. Eighty completed questionnaires were returned. Follow-up phone calls resulted in an additional 20 returns. The mean age and mean tenure of the participants were 41 years and 8 years, respectively; 23% of the participants were female. Listwise deletion of missing data yielded a usable sample of 80.

Measures of Organizational Commitment

AC, CC (including CC:HiSac and CC:LoAlt, which are portions of the original eight-item CC scale), and NC were measured in both samples with the three 8-item instruments that Allen and Meyer (1990) developed. Alpha reliabilities for these scales have ranged from .69 to

.89 (Meyer & Allen, 1991). The nine-item version of the OCQ, with an average reliability of .86 (cf. Mathieu & Zajac, 1990), was also used.

Antecedents of Commitment

Job satisfaction. Satisfaction was measured in both samples with the Job in General (JIG) Scale ($\alpha = .91$; cf. Ironson et al., 1989).

Motivation. We used the Motivational scale from the MJDQ in Sample 1 to measure the perceived motivational strength of one's job (interrater reliability is approximately .91; cf. Campion & Thayer, 1985). The scale score consists of the sum of 18 five-point items and measures some of the work experiences (e.g., job challenge, job scope, and opportunity for self expression) that Allen and Meyer (1990) proposed as precursors of AC.

Consequences of Commitment

Rated performance. We developed in-service rating checklists (ISRCs) from a job analysis of the bus operator position. The 43-item ISRC score was the total number of performance standards the operator passed while under observation by a trained (incognito) rater on a single occasion. The observation period was between 20 min and 50 min and was conducted during both peak and off-peak periods. The internal consistency of this scale was .65.

Nonrating performance. Indexes of performance having wide acceptance in the transit industry were obtained for Sample 2: (a) frequency of culpable absences per year over the previous 5 years; (b) frequency of nonculpable absences per year over the previous 5 years; (c) accidents per year, from the date of hire; (d) commendations per year (from both passengers and supervisors), from the date of hire; and (e) complaints per year (from both passengers and supervisors), from the date of hire.

Intention to quit. We used a three-item scale in Sample 1 to assess intention to quit one's current job. The internal consistency of this scale was .82.

Data Analysis

Sample 1. We assessed the expected differential relationships of AC, CC, and NC to other variables with the formula given by Cohen and Cohen (1983, p. 56) for comparing the size of dependent correlations that have been calculated using the same sample. Also, we studied the factor structure of Allen and Meyer's (1990) scales, using LISREL 7 (Jöreskog & Sörbom, 1986) and EQS (Bentler, 1989) to compare a series of nested models (cf. Bollen, 1989, pp. 291–296) to determine if the data were represented best by (a) one general factor of commitment, (b) three correlated factors (the three-component model), or (c) four correlated factors (AC, NC, CC:HiSac, and CC:LoAlt; cf. McGee & Ford, 1987). The 24×24 covariance matrix from each sample was analyzed using maximum likelihood estimation.

LISREL 7 and EQS generate an estimated matrix, using a hypothesized factor structure specified by the investigator as a guide. If only small differences exist between the actual and estimated matrices, then the hypothesized factor structure is viewed as a plausible one. Unfortunately, there is a lack of consensus regarding how best to determine when a difference is small. Ideally this determination should be made statistically with the chi-square test. However, with large sample sizes (like the one we used here) this test is not very useful because it has the power to detect nonsubstantive differences between the matrices. Accordingly, as recommended by Bollen (1989, p. 281), we report several fit measures: the normed fit index (NFI), the nonnormed fit index (NNFI), the comparative fit index (CFI; cf. Bentler, 1989), the parsimonious fit index (PFI; cf. James, Mulaik, & Brett, 1982), the goodness-of-fit index (GFI), the adjusted goodness-of-fit index (AGFI), and the root-mean-square residual (rmsr; cf. Jöreskog & Sörbom, 1986).

Sample 2. We assessed the expected differential relationships of AC, CC, and NC to other variables with the formula given by Cohen and Cohen (1983, p. 56) for comparing the size of dependent correlations.

Results

Sample 1: CFA

Maximum likelihood estimation, upon which CFAs are typically based, assumes that the data being analyzed are multivariate normal. To help evaluate the appropriateness of this assumption, we examined the skewness and kurtosis indexes associated with each of the commitment items. The small deviations from zero found among these values (whose average absolute value was .67) reflected only mild deviations from univariate normality. This leaves open the possibility that the data come from an underlying distribution that is approximately multivariate normal. Fortunately, even moderate levels of non-normality will not necessarily affect the maximum likelihood estimates (Bollen, 1989, p. 432). The means, standard deviations, and intercorrelations of the 24 commitment items are shown in Table 1.

Table 2 shows the overall fit indexes for the various factor models. To test the stability of the results, we estimated each model using the entire sample ($N = 2,301$) as well as two randomly derived subsamples (for Subsample 1, $n = 1,150$; for Subsample 2, $n = 1,151$). As one progresses from the most restricted model (one general factor) to the least restricted model (four factors), all of the indexes show incremental improvements in overall fit. The gains are largest when moving from the general-factor model to the three-factor representation, but modest gains are also consistently associated with the four-factor model. Increases in certain indexes (e.g., the NNFI, AGFI, and PFI) are particularly notable because these do not necessarily increase with a less restricted nested model.

With regard to the stability of the results, the overall fit indexes were very similar across the subsamples (see Table 2). As a further, more stringent test of cross-validation, we applied the parameter estimates based on one subsample to model the other subsample, and vice versa (cf. Cudeck & Browne, 1983). These results again paralleled those from the overall sample; that is, substantial improvements in fit were obtained by moving from a one-factor to a three-factor representation, and modest but consistent gains were also observed when comparing the three-factor model to the four-factor model.

The NNFI for the four-component model (.86; Sample 1) was very close to .90, which has been suggested by Bentler and Bonnett (1980) as a benchmark for good overall fit. Interestingly, unlike some of the alternative measures of commitment facets (cf. Mayer & Schoorman, 1992), an examination of the modification indexes associated with our models of Meyer and Allen's (1991) items failed to reveal any benefit to allowing within-scale correlated errors.

Detailed results of the four-factor model are presented in Tables 3 and 4. (The estimates associated with the three-factor model were similar in magnitude and can be obtained from Rick D. Hackett.)

Table 3 shows the squared parameter estimates associated with the four-factor model for Sample 1 and the subsamples.

Table 1

Correlations, Means, and Standard Deviations for the Affective, Continuance, and Normative Commitment Items

Item	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. AC1	4.10	1.79	—									
2. AC2	3.78	1.81	.71	—								
3. AC3	3.80	1.72	.56	.65	—							
4. AC4	4.13	1.81	.65	.60	.48	—						
5. AC5	3.64	1.80	.47	.46	.50	.44	—					
6. AC6	4.00	1.63	.48	.45	.46	.45	.47	—				
7. AC7	2.78	1.62	.35	.40	.42	.30	.37	.35	—			
8. AC8	3.23	1.53	.22	.26	.28	.23	.29	.21	.20	—		
9. CC1	4.98	1.78	-.11	-.10	-.10	-.13	-.08	-.11	-.04	-.19	—	
10. CC2	4.51	1.94	-.02	-.03	-.01	-.04	.04	-.05	.02	-.04	.41	—
11. CC3	4.28	1.94	-.15	-.15	-.11	-.16	-.07	-.22	-.06	-.05	.37	.44
12. CC4	3.99	2.06	-.09	-.10	-.08	-.11	-.07	-.17	-.01	-.06	.28	.31
13. CC5	3.93	1.94	-.01	.01	.03	-.05	.04	-.07	.08	.00	.36	.34
14. CC6	4.16	1.91	-.02	-.01	-.00	-.04	.05	-.06	.07	.02	.35	.37
15. CC7	3.79	1.78	.07	.09	.09	.07	.10	-.00	.02	.08	.08	.13
16. CC8	4.48	2.03	.02	.00	-.02	-.00	-.02	-.05	.01	-.04	.23	.21
17. NC1	3.68	1.46	.09	.10	.13	.05	.16	.10	.15	.12	.00	.07
18. NC2	4.16	1.70	.21	.27	.25	.20	.21	.16	.17	.12	-.02	.02
19. NC3	3.65	1.54	.16	.21	.19	.12	.16	.13	.14	.11	-.03	.01
20. NC4	3.11	1.58	.26	.31	.30	.21	.28	.24	.28	.20	-.01	.05
21. NC5	2.24	1.36	.17	.18	.20	.17	.21	.16	.25	.16	-.03	.01
22. NC6	3.54	1.69	.09	.15	.16	.05	.14	.07	.17	.10	.06	.09
23. NC7	2.97	1.40	.03	.07	.09	.01	.11	.06	.14	.11	.04	.07
24. NC8	3.71	1.44	.16	.19	.18	.16	.18	.15	.10	.11	-.04	-.01

Note. *N*s = 2,301, on the basis of listwise deletion of missing data. Each item was scored on a 7-point Likert-type scale. AC = affective commitment;

These can be interpreted as variance components reflecting the proportion of commitment and error variance associated with each item. Note that although the large sample helped to make the components on all commitment factors statistically significant, there was a large magnitude of error associated with many of the items, particularly those of the NC scale. Specifically, the average error component for the NC scale (Sample 1) was .74. High error components are occasionally found on items from the other scales as well, including both of the CC items (7 and 8) for which interpretability has been a source of dispute (cf. McGee & Ford, 1987; Meyer et al., 1990). Perhaps Items 7 and 8 produce some confusion among respondents given that they are the only negatively keyed items on the CC scale. In any case, even though these scales as a whole have satisfactory alphas, it is clear that some of the individual items have high noncommitment variances associated with them.

The factor intercorrelations in Table 4 closely reflect the results of Allen and Meyer's (1990) exploratory factor analysis. In particular, the correlations among AC, CC, and NC are all low to moderate. Note though, (consistent with Meyer et al.'s [1990] confirmatory results) that the two subscales of CC, CC:LoAlt and CC:HiSac, are highly correlated ($r = .77$; Sample 1).

Antecedents, Consequences, and Correlates of Commitment

Sample 1 intercorrelations. Table 5 shows the means, standard deviations, alphas, and observed (nondisattenuated) intercorrelations for all Sample 1 study variables. Zero-order correlations appear below the diagonal, and fourth-order partial correlations—controlling for age, organizational tenure,

job tenure, and general job satisfaction—appear above the diagonal.

Consistent with earlier research and with the CFA was that both the zero-order and partial correlations show AC, CC, and NC to be quite separate from one another. For example, when we ran tests for differences between dependent correlations (all d 's = 2 and 215), the JIG, MJDQ—Motivation scale, and the OCQ all showed statistically significant differential relationships (p s < .01) with AC, CC, and NC. Consistent with our expectations was that AC had the strongest positive relationship with each of these variables (r s = .51, .52, and .72, for JIG, MJDQ—Motivational scale, and OCQ, respectively), whereas CC was negatively correlated with these same measures (r s = -.11, -.11, and -.11, respectively). Also as expected, intention to quit was significantly correlated with all three of Allen and Meyer's (1990) commitment scales, with AC showing the strongest relationship ($r = -.42$).

With regard to the viability of CC:LoAlt and CC:HiSac as separate constructs, these scales generally did not show differential relationships with other variables, at least with regard to their directions. However, the negative relationships involving CC:LoAlt, although not large in magnitude, did tend to achieve statistical significance more often.

As expected, age and organizational tenure were positively related to AC (r s = .17 and .17 for age and tenure, respectively) and to CC (r s = .15 and .24 for age and tenure, respectively); but, contrary to expectations, these measures were also positively related to NC (r s = .20 and .23 for age and tenure, respectively). To further understand these findings, we examined the relationship of each component separately with age (partialing

11	12	13	14	15	16	17	18	19	20	21	22	23	24
—													
.65	—												
.49	.47	—											
.45	.38	.68	—										
.17	.12	.18	.19	—									
.27	.25	.31	.32	.23	—								
.02	-.01	.02	.04	.01	.01	—							
-.04	-.04	.02	.03	.05	.03	.09	—						
-.02	-.01	.04	.05	.06	.04	.21	.36	—					
-.03	-.04	.05	.06	.03	-.00	.27	.29	.36	—				
-.04	-.04	.04	.04	.01	-.07	.20	.14	.19	.41	—			
.05	.02	.10	.08	.05	.01	.20	.21	.27	.44	.31	—		
.06	.02	.07	.08	.05	.03	.37	.12	.22	.37	.29	.44	—	
-.06	-.03	-.02	-.02	.03	.00	.12	.28	.26	.21	.13	.11	.14	—

CC = continuance commitment; NC = normative commitment.

out the effect of organizational tenure) and with organizational tenure (partialing out the effect of age). For all of these tests, $dfs = 2$ and 215. With age held constant, tenure correlated .19, .16, and .19 (all $ps < .01$) with CC, CC:LoAlt, and CC:HiSac, re-

spectively. With tenure held constant, age correlated .00, .01, and .01 (all $ps > .05$) with these same three scales, respectively. This suggests that, for these nurses, CC and its subcomponents are related to tenure but not to age. The corresponding partial

Table 2
Overall Fit Indexes for the Commitment Models

Model	χ^2	df	NFI	NNFI	CFI	GFI	PFI	AGFI	rmsr
Sample 1 ($N = 2,301$)									
Null	16,820.46	276	NA	NA	NA	NA	NA	NA	NA
One general factor	8,700.18	252	.48	.44	.49	.68	.44	.62	.44
Three correlated factors	2,626.88	249	.84	.84	.86	.91	.76	.89	.17
Four correlated factors	2,253.09	246	.87	.86	.88	.92	.77	.90	.16
Subsample 1 ($n = 1,150$)									
Null	8,748.97	276	NA	NA	NA	NA	NA	NA	NA
One general factor	4,556.92	252	.48	.44	.49	.67	.44	.61	.44
Three correlated factors	1,637.44	249	.81	.82	.84	.89	.73	.86	.20
Four correlated factors	1,418.15	246	.84	.85	.86	.90	.75	.88	.19
Subsample 2 ($n = 1,151$)									
Null	8,451.37	276	NA	NA	NA	NA	NA	NA	NA
One general factor	4,486.71	252	.47	.43	.48	.67	.43	.61	.44
Three correlated factors	1,345.70	249	.84	.85	.87	.90	.76	.88	.17
Four correlated factors	1,182.54	246	.86	.87	.89	.92	.77	.90	.15

Note. NFI = normed fit index; NNFI = nonnormed fit index; CFI = comparative fit index; GFI = goodness-of-fit index; PFI = parsimonious fit index; AGFI = adjusted goodness-of-fit index; rmsr = root-mean-square residual; NA = not applicable.

Table 3
Variance Components for the Commitment Items for the Four-Factor Model

Item	Affective commitment			Continuance commitment: low alternatives			Continuance commitment: high sacrifice			Normative commitment			Error		
	S1	SS1	SS2	S1	SS1	SS2	S1	SS1	SS2	S1	SS1	SS2	S1	SS1	SS2
Affective commitment															
1	.65	.65	.66										.35	.35	.34
2	.70	.69	.70										.30	.31	.30
3	.56	.56	.56										.44	.44	.44
4	.52	.51	.53										.48	.49	.47
5	.39	.40	.37										.61	.60	.63
6	.37	.39	.35										.63	.61	.65
7	.25	.29	.22										.75	.72	.78
8	.11	.11	.12										.88	.89	.88
Continuance commitment															
1				.23	.22	.24							.77	.78	.76
3				.68	.72	.64							.32	.27	.36
4				.54	.55	.54							.46	.45	.47
8				.14	.13	.15							.86	.87	.85
2							.24	.20	.28				.76	.80	.72
5							.68	.69	.67				.32	.31	.33
6							.62	.61	.64				.37	.39	.36
7							.06	.04	.07				.94	.96	.93
Normative commitment															
1										.16	.16	.16	.84	.84	.84
2										.17	.18	.16	.83	.81	.84
3										.26	.28	.24	.74	.72	.76
4										.54	.56	.52	.46	.44	.48
5										.26	.27	.24	.74	.73	.76
6										.34	.34	.34	.66	.66	.66
7										.28	.29	.28	.72	.71	.72
8										.10	.11	.09	.90	.89	.90

Note. For Sample 1 (S1), $N = 2,301$; for Subsample 1 (SS1), $n = 1,150$; for Subsample 2 (SS2), $n = 1,151$.

correlations of age and tenure with AC were identical ($r = .08$, $p < .01$). The correlation of tenure with NC, with age held constant ($r = .14$, $p < .01$), was stronger than the correlation between NC and age, with tenure held constant ($r = .06$, $p < .01$).

Sample 2 intercorrelations. The means, standard deviations, alphas, and observed (nondisattenuated) intercorrelations for Sample 2 (bus operators) are presented in Table 6. Zero-order correlations appear below the diagonal, and third-order partial correlations—controlling for age, organi-

zational tenure, and general job satisfaction—appear above the diagonal.

As with the nurse sample, there was some evidence from the bus operators to suggest that AC, CC, and NC were measuring different constructs. For example, when tests for differences between dependent correlations were performed (all $dfs = 77$), the JIG and OCQ each had significant differential relationships ($ps < .01$) with Allen and Meyer's (1990) commitment components. Specifically, as expected (and consistent with Sample 1),

Table 4
Factor Intercorrelations

Measure	Sample 1 ($N = 2,301$)				Subsample 1 ($n = 1,150$)				Subsample 2 ($n = 1,151$)			
	1	2	3	4	1	2	3	4	1	2	3	4
1. Affective commitment	—				—				—			
2. Continuance commitment: low alternatives	-.21	—			-.20	—			-.22	—		
3. Continuance commitment: high sacrifice	-.00	.77	—		-.00	.73	—		-.00	.81	—	
4. Normative commitment	.44	-.02	.12	—	.45	.00	.14	—	.43	-.04	.09	—

Table 5
Descriptive Statistics for the Nurse Sample

Measure	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	37.59	9.11	—											
2. Organizational tenure	9.11	7.33	.63	—										
3. Quit job	7.91	3.70	-.24	-.19	.82	-.19	-.13	-.12	-.11	-.04	-.14	-.12		
4. AC	29.46	9.70	.17	.17	-.42	.86	-.06	.31	.31	-.16	-.02	.62		
5. CC	34.12	9.81	.15	.24	-.08	-.07	.79	.01	-.06	.85	.87	-.05		
6. NC	27.06	7.16	.20	.23	-.24	.38	.04	.73	.11	-.04	.04	.28		
7. MJDQ—Motivational scale	61.20	9.98	.10	.08	-.39	.52	-.11	.22	.84	-.09	-.03	.34		
8. CC:LoAlt	13.27	4.54	.14	.21	-.02	-.19	.86	-.02	-.17	.70	.62	-.09		
9. CC:HiSac	12.58	4.61	.15	.25	-.12	-.01	.88	.08	-.04	.64	.72	-.02		
10. OCQ	35.66	12.56	.17	.05	-.39	.72	-.11	.34	.57	-.18	-.04	.91		
11. JIG	37.57	11.39	.14	.07	-.51	.51	-.11	.21	.59	-.19	-.05	.57	.90	
12. Job tenure	2.54	0.80	.26	.41	-.04	.05	.18	.11	-.01	.17	.17	-.03	.00	—

Note. After listwise deletion of missing data, *Ns* = 2,218. Values in boldface on the diagonal are reliability estimates; values below the diagonal are zero-order correlations; and values above the diagonal are fourth-order partial correlations controlling for age, organizational tenure, job tenure, and satisfaction with job in general. None of the correlations were corrected for unreliability. All coefficients $\geq .04$ (approximately) are statistically significant at $p < .05$, one-tailed. Quit job = intention to quit job; AC = affective commitment; CC = continuance commitment; NC = normative commitment; MJDQ—Motivational scale = the Multimethod Job Design Questionnaire, Motivational scale; CC:LoAlt = continuance commitment: low alternatives; CC:HiSac = continuance commitment: high sacrifice; OCQ = Organizational Commitment Questionnaire; JIG = satisfaction with job in general.

AC showed the strongest positive relationship with JIG ($r = .64$) and the OCQ ($r = .71$), whereas CC correlated negatively to these variables ($r_s = -.10$ and $-.11$ for JIG and OCQ, respectively). Finally (again similar to Sample 1), the negative relationships involving CC:LoAlt tended to be larger in magnitude than those of CC:HiSac.

Consistent with our expectations was that age and organizational tenure were positively related to CC (for age, $r = .34$, $p < .01$; for tenure, $r = .19$, $p < .05$), but were unrelated to NC. Contrary to our expectations though, age and tenure were unrelated to AC. As with Sample 1, in Sample 2 we further explored the relationships of age and tenure to the commitment facets through partial correlations (all *dfs* = 77). With age held constant, tenure correlated .05, $-.01$, and .12 (all $ps > .05$) with CC, CC:LoAlt, and CC:HiSac, respectively. With tenure held constant, age correlated .27, .30, and .21 (all $ps < .05$) with these same scales, respectively. Accordingly, for the bus operators, CC and its subcomponents are related to age but are unrelated to tenure. Neither age (partialing out tenure) nor tenure (partialing out age) correlated significantly with AC or NC.

With regard to performance, the partial correlations revealed only two significant relationships: AC related negatively to accidents, $r(77) = -.22$, $p < .05$, whereas CC:HiSac related negatively to commendations, $r(77) = -.23$, $p < .05$.

Discussion

The Three-Component Model of Organizational Commitment

When the results from Samples 1 and 2 are examined together, the preponderance of evidence is in support of a three-component model of commitment. Although the CFA indicated that the division of the CC scale into two subscales (CC:LoAlt and CC:HiSac) produced a slightly better fit to the data, these subscales were highly correlated and, more important,

they generally did not have strong differential relationships to other variables. These overall favorable results should be tempered by mention of the high error components of some items. In particular, the confirmatory results implied that there is substantial noncommitment variance in the measurement of NC and suggested that Items 7 and 8 might be dropped from the CC scale.

Antecedents of the Components of Commitment

For nurses, the MJDQ—Motivational scale had the strongest positive correlation with AC in comparison with either CC or NC. This reinforces the notion that, of the three commitment components, AC is most affected by the nature of one's work experiences (Allen & Meyer, 1990).

CC was associated positively with organizational tenure but was unrelated to age for the nurses, whereas, for the bus operators, CC was positively associated with age but was unrelated to tenure. The partial correlations between age (holding tenure constant) and CC:HiSac ($r = .21$, $p < .05$) and between age and CC:LoAlt ($r = .30$, $p < .01$) for bus operators suggested that perceived restricted job mobility is particularly associated with advancing age for this group of workers. Perhaps older bus operators have a more narrowly prescribed and less transferable set of skills in comparison with older nurses. Similarly, whereas a city generally has only one transit authority, it often has several hospitals. Accordingly, for those reluctant to uproot and move to another city, prospective employers are likely to be more plentiful for nurses than for bus operators.

Obviously, research concerning the possible differential antecedents of AC, CC, and NC should continue. Shore and Barksdale (1991) provided a good example in this regard by identifying a set of variables (e.g., internal and external job mobility) that predicted CC but were unrelated to AC.

Table 6
Descriptive Statistics for the Bus Operator Sample

Measure	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Age	40.70	8.08	—														
2. Organizational tenure	7.88	5.92	.45**	—													
3. AC	37.91	9.87	.04	-.11	.84	-.13	.49**	-.11	-.12	.47**							
4. CC	39.29	8.50	.34**	.19*	-.16	.75	.05	.84**	.80**	-.06							
5. NC	36.16	7.95	.16	.10	.57**	.06	.75	.00	.11	.30**							
6. CC:LoAlt	14.40	4.27	.33**	.13	-.22*	.86**	-.03	.70	.54**	-.09							
7. CC:HiSac	15.25	4.11	.31**	.23*	-.07	.81**	.15	.56**	.73	-.04							
8. OCQ	50.88	10.69	.05	-.21*	.71**	-.11	.44**	-.21*	-.02	.89							
9. JIG	43.41	11.06	.07	-.11	.64**	-.10	.37**	-.23*	.03	.72**	.89						
10. Culpable absences	4.52	2.96	.08	.31**	-.22*	.04	-.09	-.02	.09	-.32**	-.22*						
11. Nonculpable absences	3.72	2.66	.27**	.68**	-.07	.13	.14	.06	.12	-.28**	-.09	.42**					
12. Commendations	0.25	0.41	-.19*	-.20*	-.01	-.21*	-.16	-.20*	-.32**	.04	.08	.17	-.05				
13. Complaints	0.02	0.07	.04	-.06	-.17	-.01	-.03	.09	-.08	-.11	-.08	-.13	-.09	-.05			
14. Accidents	0.18	0.48	-.15	-.08	-.15	-.00	-.18	-.03	-.03	-.11	.03	.07	.24*	-.00	-.06		
15. ISRC	31.98	3.40	.05	-.07	-.03	-.07	-.12	.00	-.15	-.00	-.03	.03	-.02	.20	-.12	-.14	.65

Note. After listwise deletion for missing data, $N_s = 80$. Values in boldface on the diagonal are reliability estimates. Values below the diagonal are zero-order correlations, and those above the diagonal are third-order partial correlations controlling for age, organizational tenure, and satisfaction with job in general. AC = affective commitment; CC = continuance commitment; NC = normative commitment; JIG = satisfaction with job in general; ISRC = in-service rating checklist.

* $p < .05$, one-tailed. ** $p < .01$, one-tailed.

Consequences of the Components of Commitment

Unlike previous investigators (Konovsky & Cropanzano, 1991; Meyer et al., 1989; Shore & Barksdale, 1991) who found rated performance to be either positively related or unrelated to AC but negatively related to CC, we did not observe differential relationships involving rated performance. This may have been because our rating was based on a short period of observation, whereas those in previous studies (presumably) reflected annual performance. However, a pattern similar to Meyer et al.'s was found with certain nonrating performance measures. For the bus operators, AC correlated negatively with traffic accidents whereas CC:HiSac correlated negatively with commendations. This pattern makes sense in that those wishing only to stay with an organization (i.e., with high CC) might not be expected to behave in exemplary ways, especially when these are outside the view of the supervisor (cf. Smith, Organ, & Near, 1983). Because continued employment in an organization is a necessity for the employee with high CC, the nature of the link between commitment and on-the-job behavior is likely to be dependent on the implications of that behavior for employment (Meyer & Allen, 1991). Failure to obtain commendations is a case in point, as this certainly did not jeopardize continued employment at the municipal bus authority that we studied.

Future Directions

With the minor exceptions regarding the status of Items 7 and 8 of the CC scale, the results reported here—combined with other exploratory factor analyses (Allen & Meyer, 1990; Dunham & Grube, 1990; McGee & Ford, 1987) and CFAs (Meyer et al., 1990)—reveal a fairly stable underlying structure to Meyer and Allen's (1991) scales. The more substantial remaining challenge lies in demonstrating that these components have sizable differential relationships to other variables, especially work outcomes. Citing Cook and Campbell (1979), Mathieu and Zajac (1990) contended that "unless the more micro aspects of attitudinal commitment are demonstrated to have different relationships with other variables of interest, it serves little purpose to operate at a more micromediation level" (p. 186). This point is equally relevant to the other multifaceted conceptualizations of commitment that exist (cf. Caldwell, Chatman, & O'Reilly, 1990; Mayer & Schoorman, 1992; O'Reilly & Chatman, 1986). If research supporting the discriminant validity of these measures accumulates, then more emphasis could be placed on testing competing path-analytic models that contrast the causal ordering of various differential antecedents and outcomes (e.g., Werner & Thomas, 1992).

Attempts to empirically demonstrate any attitude-behavior relationship, let alone a series of differential relationships, are seriously complicated by substantive and methodological constraints (cf. Johns, 1991). Applying Johns's perspective to AC and performance ratings, for example, note that a relationship will be observed only if (a) employees in the sample exhibit substantial variation on AC, (b) the employees have the ability and opportunity to translate increased commitment into enhanced performance, (c) the supervisor detects the changes in performance, and (d) the performance differences are reflected on the appraisal instrument. Our bus operator sample was weak on

Point C because, although the ISRC was a comprehensive performance checklist, it pertained only to a 20-min to 50-min observation. This may have accounted for the failure to obtain differential relationships between the commitment measures and performance ratings. Elements of Point B might also be involved given the more general meta-analytic finding that performance ratings and various forms of commitment are only modestly related (sample-size weighted mean $r_t = .13$; cf. Mathieu & Zajac, 1990).

Johns (1991) has provided examples of other constraints as they apply to attitudes, absenteeism, and turnover. The underlying message is that a series of well-conceived studies is needed to uncover true-score attitude-behavior relationships. This task is just beginning for researchers of the multiple-component models of organizational commitment.

References

- Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance, and normative commitment to the organization. *Journal of Occupational Psychology*, 63, 1-18.
- Becker, H. S. (1960). Notes on the concept of commitment. *American Journal of Sociology*, 66, 32-42.
- Bentler, P. M. (1989). *EQS: Structural equations program manual*. Los Angeles: BMDP Statistical Software.
- Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88, 588-606.
- Bollen, K. A. (1989). *Structural equations with latent variables*. New York: Wiley.
- Bycio, P. (1992). Job performance and absenteeism: A review and meta-analysis. *Human Relations*, 45, 193-220.
- Caldwell, D. F., Chatman, J. A., & O'Reilly, C. A. (1990). Building organizational commitment: A multifirm study. *Journal of Occupational Psychology*, 63, 245-261.
- Campion, M. A., & Thayer, P. W. (1985). Development and field evaluation of an interdisciplinary measure of job design. *Journal of Applied Psychology*, 70, 29-43.
- Cohen, J., & Cohen, P. (1983). *Applied multiple regression analysis for the behavioral sciences*. Hillsdale, NJ: Erlbaum.
- Cook, T. D., & Campbell, D. T. (1979). *Quasi-experimentation: Design & analysis issues for field settings*. Boston: Houghton Mifflin.
- Cudeck, R., & Browne, M. W. (1983). Cross-validation of covariance structures. *Multivariate Behavioral Research*, 18, 147-167.
- Dunham, R. B., & Grube, J. A. (1990, August). *Organizational commitment: The construct and its measurement*. Paper presented at the annual meeting of the Academy of Management, San Francisco, CA.
- Hrebiniak, L. G., & Alutto, J. A. (1972). Personal and role-related factors in the development of organizational commitment. *Administrative Science Quarterly*, 17, 555-573.
- Ironson, G. H., Smith, P. C., Brannick, M. T., Gibson, W. M., & Paul, K. B. (1989). Construction of a Job in General Scale: A comparison of global, composite, and specific measures. *Journal of Applied Psychology*, 74, 193-200.
- James, L. R., Mulaik, S. A., & Brett, J. M. (1982). *Causal analysis: Assumptions, models, and data*. Beverly Hills, CA: Sage.
- Jaros, S. J., Jermier, J. M., Koehler, J. W., & Sincich, T. (1993). Effects of continuance, affective and moral commitment on the withdrawal process: An evaluation of eight structural equation models. *Academy of Management Journal*, 36, 951-995.
- Johns, G. (1991). Substantive and methodological constraints on behavior and attitudes in organizational research. *Organizational Behavior and Human Decision Processes*, 49, 80-104.
- Jöreskog, K. G., & Sörbom, D. (1986). *LISREL 7: Analysis of linear structural relationships by maximum likelihood, instrumental variables, and least squares methods* (4th ed.). Mooresville, IN: Scientific Software.
- Konovsky, M. A., & Cropanzano, R. (1991). Perceived fairness of employee drug testing as a predictor of employee attitudes and job performance. *Journal of Applied Psychology*, 76, 698-707.
- Mathieu, J. E., & Zajac, D. M. (1990). A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment. *Psychological Bulletin*, 108, 171-194.
- Mayer, R. C., & Schoorman, F. D. (1992). Predicting participation and production outcomes through a two-dimensional model of organizational commitment. *Academy of Management Journal*, 35, 671-684.
- McGee, G. W., & Ford, R. C. (1987). Two (or more?) dimensions of organizational commitment: Reexamination of the affective and continuance commitment scales. *Journal of Applied Psychology*, 72, 638-642.
- Meyer, J. P., & Allen, N. J. (1984). Testing the "side-bet theory" of organizational commitment: Some methodological considerations. *Journal of Applied Psychology*, 69, 372-378.
- Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1, 61-89.
- Meyer, J. P., Allen, N. J., & Gellatly, I. R. (1990). Affective and continuance commitment to the organization: Evaluation of measures and analysis of concurrent and time-lagged relations. *Journal of Applied Psychology*, 75, 710-720.
- Meyer, J. P., Paunonen, S. V., Gellatly, I. R., Goffin, R. D., & Jackson, D. N. (1989). Organizational commitment and job performance: It's the nature of the commitment that counts. *Journal of Applied Psychology*, 74, 152-156.
- Mowday, R. T., Porter, L. W., & Steers, R. M. (1982). *Employee-organization linkages: The psychology of commitment, absenteeism, and turnover*. San Diego, CA: Academic Press.
- O'Reilly, C. A., & Chatman, J. (1986). Organizational commitment and psychological attachment: The effects of compliance, identification, and internalization on prosocial behavior. *Journal of Applied Psychology*, 71, 492-499.
- Randall, D. M., Fedor, D. B., & Longenecker, C. O. (1990). The behavioral expression of organizational commitment. *Journal of Vocational Behavior*, 36, 210-224.
- Reichers, A. E. (1985). A review and reconceptualization of organizational commitment. *Academy of Management Review*, 10, 465-476.
- Ritzer, G., & Trice, H. M. (1969). An empirical study of Howard Becker's side-bet theory. *Social Forces*, 47, 475-479.
- Seashore, S. E., Indik, B. P., & Georgopoulos, B. S. (1960). Relationships among criteria of job performance. *Journal of Applied Psychology*, 44, 195-202.
- Shore, L. M., & Barksdale, K. (1991, August). *A longitudinal assessment of the antecedents of affective and continuance commitment*. Paper presented at the meeting of the Academy of Management, Miami, FL.
- Smith, C. A., Organ, D. W., & Near, J. P. (1983). Organizational citizenship behavior: Its nature and antecedents. *Journal of Applied Psychology*, 68, 653-663.
- Werner, J. M., & Thomas, D. C. (1992, August). *Job satisfaction and performance revisited: Testing for the mediating effects of two types of organizational commitment*. Paper presented at the meeting of the Academy of Management, Las Vegas, NV.

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